

What is claimed is:

1. An impact modified polyolefin composition comprising a polyolefin homopolymer resin and an impact modifying fluid comprising a nonionic surfactant and, optionally, a diluent selected from the group comprising mineral oil and polybutene, wherein the impact modified polyolefin composition has a Gardner impact strength of 100 in-lbs or greater as measured in accordance with ASTM D 5420.
2. The impact modified polyolefin composition according to claim 1 wherein the nonionic surfactant is selected from the group consisting of ethoxylated ethers, ethoxylated alkylphenols, ethoxylated aryl phenols and ethoxylated sorbitan fatty acid esters.
3. The impact modified polyolefin composition according to claim 1 wherein the nonionic surfactant is an ethoxylated sorbitan fatty acid ester selected from the group consisting of polyoxyethylene sorbitan monolaurate, polyoxyethylene sorbitan monopalmitate, polyoxyethylene sorbitan monostearate, polyoxyethylene sorbitan tristearate, polyoxyethylene sorbitan monooleate and polyoxyethylene sorbitan trioleate.
4. The impact modified polyolefin composition according to claim 1 wherein the polyolefin homopolymer resin is a polypropylene homopolymer.
5. The impact modified polyolefin composition according to claim 1 wherein the impact modified polyolefin composition has a flexural modulus of 40 kpsi or greater as measured in accordance with ASTM D 790.
6. The impact modified polyolefin composition according to claim 1 wherein the impact modified polyolefin composition has a tensile modulus of 60 kpsi or greater as measured in accordance with ASTM D 638.

7. An impact modified polyolefin composition comprising a homopolymer of polypropylene and from about 2% to about 8% by weight of an impact modifying fluid comprising polyoxyethylene sorbitan trioleate and mineral oil, wherein the ratio of polyoxyethylene sorbitan trioleate to mineral oil in the impact modifying fluid is from about 10:90 to about 99:1, wherein the impact modified polyolefin composition has a Gardner impact strength of 100 in-lbs or greater as measured in accordance with ASTM D 5420.

8. The impact modified polyolefin composition according to claim 7 wherein the impact modified polyolefin composition has a flexural modulus of 40 kpsi or greater as measured in accordance with ASTM D 790.

9. The impact modified polyolefin composition according to claim 7 wherein the impact modified polyolefin composition has a tensile modulus of 60 kpsi or greater as measured in accordance with ASTM D 638.

10. An impact modifier for use in polyolefins comprising a mixture of an ethoxylated sorbitan fatty acid ester and mineral oil, wherein the ratio of ethoxylated sorbitan fatty acid ester to mineral oil is within the range of from 5:95 to about 99:1.

11. The impact modifier according to claim 10 wherein the ethoxylated sorbitan fatty acid ester is selected from the group consisting of polyoxyethylene sorbitan monolaurate, polyoxyethylene sorbitan monopalmitate, polyoxyethylene sorbitan monostearate, polyoxyethylene sorbitan tristearate, polyoxyethylene sorbitan monooleate and polyoxyethylene sorbitan trioleate.

12. A method of forming an injection moldable polyolefin composition exhibiting a Gardner impact strength of 100 in-lbs or greater as measured in accordance with ASTM D 5420 comprising:

providing a polyolefin composition comprising a blend of one or more polyolefin homopolymer resins and from about 2.0% to about 8.0% by weight of one

or more nonionic surfactants and optionally a diluent selected from the group consisting of mineral oil and polybutene;  
heating the polyolefin composition to form a flowable melt;  
injecting the flowable melt into a mold; and  
removing the part from the mold.

13. The method according to claim 12 wherein the nonionic surfactant is selected from the group consisting of ethoxylated ethers, ethoxylated alkylphenols, ethoxylated aryl phenols and ethoxylated sorbitan fatty acid esters.